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The rooster's legs are straight.

The boy's are not.

The rooster got plenty of vitamin D.

Fortunately, extreme cases of rickets such as the one above illustrated are comparatively rare nowadays, due to the widespread prophylactic use of vitamin D recommended by the medical profession

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THE JOURNAL OF SCHOOL HEALTH

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THE AGE-INCIDENCE OF DEFECTS IN SCHOOL CHILDREN, THEIR CHANGING HEALTH STATUS*

C. H. MAXWELL, M.D. AND W. P. BROWN, M.D.

New York State Education Department

The total incidence of various defects in school children varies little from year to year but the changes over a period of 20 years reveal significant trends, as shown by Table I:

Table I

PUPILS WITH DEFECTS FOUND AND TREATED 1925-1945

**	1925-26				1945-46			
Pupils Registered*..	773,021				727,180			
Pupils Examined	615,429	(79.3 Percent)			680,606	(93.6 Percent)		
	Found	Per 1000	Treated	Pct.	Found	Per 1000	Treated	Pct.
Defects	556,710	905	264,476	47.5	556,912	818	354,175	64
Defects other than teeth	345,267	561	135,882	39	260,370	382	159,201	61
Teeth	211,443	344	128,594	60.8	296,542	436	194,974	66
Nutrition	58,674	95	34,103	58.1	25,400	37	16,349	64
Eyes	25,796	85	22,898	43.3	59,367	89	43,395	73
Tonsils	114,492	186	21,887	19.1	65,607	96	23,957	37
Heart	8,794	14	3,367	38.2	8,737	12	6,108	76
Orthopedic	14,271	23	7,966	55.8	33,391	49	21,500	62
Hernia	994	1.6	527	53	2,111	3	1,391	66
Speech	4,984	8	1,869	37.5	10,839	16	6,388	59
Thyroid	19,718	32	9,511	48.2	2,315	4	1,518	65
Ears	8,267	13	3,195	38.6	17,870	26	11,616	65
Other defects	62,277	101	30,559	49	34,733	51	26,979	78

The figures for 1925-26 cover all the pupils reported in the public schools of New York State except New York City, Rochester and Buffalo. In 1945-46 the report covers all except those in New York City, Rochester and Buffalo and about 240,000 pupils who were in small rural schools and in Union Free Elementary schools. The increased percentage of children examined is probably due to centralization of many schools, thus placing many of the pupils in larger schools, and bringing many of the one-room schools under the jurisdiction of large central schools. With centralization, the health service in the schools has improved markedly and public health nurses certified as school nurse teachers have been added to the health service staff. Because of this, a much larger percentage of the defects was brought under medical care, the percentage jumping from 47.5 to 64 percent. For defects other than teeth, the percentage brought under care jumped from 39 to 61 percent.

There was a definite decrease in defects other than teeth. The

*Presented at the Annual Meeting of the American School Health Association, Atlantic City, October 5, 1947.

children with defects in teeth increased from 344 per thousand to 436 per thousand. This probably is accounted for by the better examinations given in 1945 to the children by the dental hygiene teacher and the school physician. Orthopedic defects and hernias found have increased in number probably because of the stripped examination which has been more widely used since the first examinations recorded in this table. Furthermore, the recent examinations for the athletic squads require more details than previously. Increased emphasis has been placed recently upon the finding of children with speech defects and the supervision of such pupils in schools. A greater interest in speech defects has resulted in more being found during the later medical examinations. Defects decreasing have been faulty nutrition, diseased tonsils and abnormal thyroids. Defects of nutrition possibly decreased somewhat because of a difference in viewpoint as to what constitutes faulty nutrition. In 1925-26 much more significance was placed upon the height-weight tables than at present. A defect of nutrition now is considered a diagnosis based upon an examination of the child, with less regard for the height-weight tables than formerly. This decrease, however, parallels the report that the soldiers in World War II were ¾ inch taller and 10 pounds heavier than their fathers in World War I.

Tonsil defects reported definitely decreased in the twenty-year period. This may be due to the present conservatism in recommendations by the physician doing the work and may have been influenced somewhat by the decrease in the number of severe respiratory and ear infections. In the twenty-year period, the deaths from mastoiditis have decreased until in 1945 they are 1/10 what they were twenty years before. Newer drugs, better care and possibly fewer epidemics of communicable disease may have resulted in there actually being a definitely smaller number of badly infected tonsils than there were in 1925. The thyroid defects reported have decreased in number possibly due to increased use of iodized salt. Defects of ears, other than hearing, have increased probably because of the present law which requires the examination annually of the hearing of all school children with an audiometer. This results in the follow-up otological examination of many of these children, and directs more attention in the school medical examination to the ears than was the custom 20 years ago.

The changes in death rate from various causes may give some clues as to the changing health status of the school child. This is shown in Table II.

Table II

DEATH RATES PER 1,000,000 IN NEW YORK STATE
(Outside New York City)
Age 5 - 19 years

	1925	1945	Per Cent Decrease	Per Cent Increase
1 Accident (1)	515.1	318.2	37.7	
2 Diseases of heart (3)	248	51.2	79.1	
3 Tuberculosis (2)	346.1	49.7	85.5	
4 Malignant tumors (24)	17	41.7		148
5 Pneumonia (4)	172.7	41.7	75.6	
6 Appendicitis (5)	115.1	30.7	73	
7 Leukemia (21)	19.9	26.3		33
8 Congenital malformations (33)	7.4	19.0		160
9 Suicide (25)	14.8	19		30
10 Poliomyelitis (7)	50.2	19	53	
11 Diabetes (17)	27.3	18.3	32.4	
12 Chronic nephritis (13)	29.5	18.3	37.5	
13 Other nervous diseases (22)	17.7	15.4	12.5	
14 Diseases of the mouth (48)	2.9	12.4		325
15 Acute rheumatic fever (9)	37.6	11.7	68.6	
16 Epilepsy (11)	32.4	10.2	68.1	
17 Bronchitis (36)	6.6	8.8		33
18 Influenza (8)	42	8	80.7	
19 Pharynx, tonsils (14)	28.7	8	71.7	
20 Hernia (23)	17.7	5.9	66.6	
Others	521.0	119.2	77	
Total	2,270	859.2	62	

These figures are for comparable population groups. All children from 5 to 19 in New York State except those in New York City are included in this table. The population in this age group was about 1,300,000 in both periods. The causes of death are listed in the order of their decreasing frequency in 1945. Their place on the list in 1925 is shown in the figure in parenthesis immediately following the listing of the cause of death. The greatest percentage decrease has occurred in the communicable diseases. The greatest relative and absolute decrease was in tuberculosis. The next greatest absolute decrease was in accidental death. The importance of instruction in the prevention of accidents is brought out by the fact that there were as many deaths due to accidents as from the total of the next ten most common causes of death, and six times as many as from heart disease which was second on the list, in the age period from 5 to 19 years in 1945.

The decrease in deaths caused by diseases of the heart may be due to better communicable disease control and better methods of treatment for these diseases. The decrease in deaths from tuberculosis indicates that control measures for tuberculosis are producing startling results. The increase in the number of children reported as dying from malignant tumors is possible due to the increased attention to malignancy at all ages. If leukemia is added

to the malignancy, the percentage of children dying from these causes is particularly significant. The decrease in deaths from pneumonia may be accounted for by better diagnosis and better medical care. The increase in deaths from congenital malformations from 5 to 19 might be influenced by the fact that a smaller percentage of these children died in the first four years of life in 1945, the deaths per 100,000 in 1925 being 167 and in 1945, being 132. The position of suicides on the list would indicate the importance of a good mental health program.

The percentage decrease in the death rate for all causes was 62%;—an outstanding improvement.

To understand what has happened in other age groups, the following table is given:

Table III

DEATH RATES, 1925 AND 1945
NEW YORK STATE, EXCEPT NEW YORK CITY

Age	Deaths per 100,000 1925	1945	Percent Decrease
Under 1	7098	3370	52½
1-4	576	140	76
5-19	227	85	63
20-24	388	129	67
25-34	468	184	61
35-44	679	396	42
45-54	1186	854	28
55-64	2425	2183	10
65-74	5424	4582	15½
75 and over	13930	12176	12½
Total	1334	1134	15

The population covered was 5,295,011 in 1925 and 6,216,754 in 1945. The death rate in 1925 was the lowest in the school age group, and it remained the lowest in 1945, and is 1/3 less than the next lower age group (20 to 24). The decrease in the death rate was about as great in the school-age group as in any other age group except in the age 1 to 4. Some health workers have questioned the expenditure of funds and time on the health of the school child since the death rate is so low. These figures would seem to indicate that time spent in the health supervision of children of school age may be achieving results which justify this expenditure of private and public effort.

A summary was made of annual reports from nineteen school systems in New York State in which the examinations of the children in the kindergarten and grades one to twelve were reported for the school year 1945-46. These school systems ranged in size from 1200 pupils to 14,000 pupils. 83,019 children were examined,

or about 95% of the total school population of these 19 school systems. These pupils were fairly evenly distributed in all the grades with a few less in the upper grades. There were approximately 6,000 in the grades where the fewest children were examined. The children were reported by grades. Their age can be estimated from the following table which gives the median age for grades in all the public schools in New York State for that year.

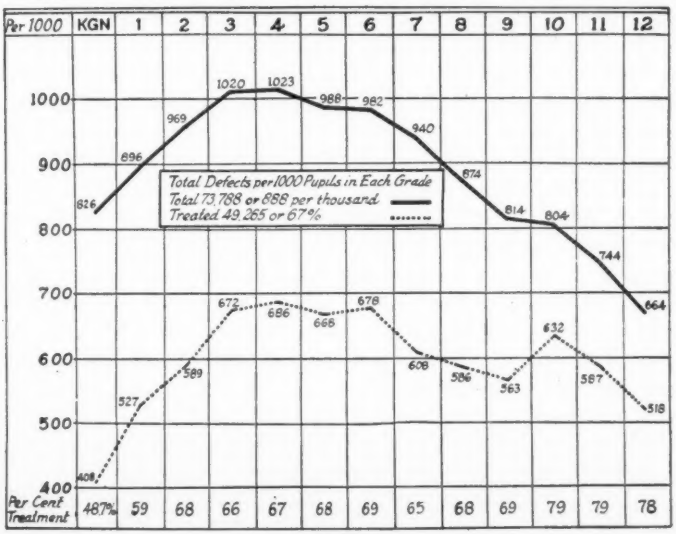
Table IV

MEDIAN AGES OF PUPILS IN VARIOUS GRADES, 1945-46

Kindergarten	5 years, 4 months
Grade 1	6 years, 3 months
2	7 years, 5 months
3	8 years, 6 months
4	9 years, 6 months
5	10 years, 6 months
6	11 years, 6 months
7	12 years, 6 months
8	13 years, 7 months
9	14 years, 6 months
10	15 years, 6 months
11	16 years, 5 months
12	17 years, 3 months

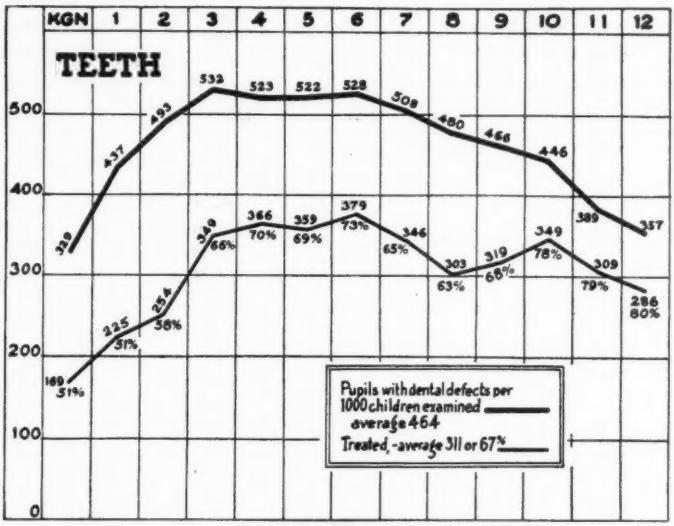
The age is taken in the fall shortly after the children enter school. About 60% of the children were within six months of the median age. The other 40% were almost entirely within a year and a half of the median age.

Graph No. 1 gives the curve for total defects found and treated.



GRAPH 1

The importance of dental defects and the need of a dental program in the schools is shown in Graph 2.

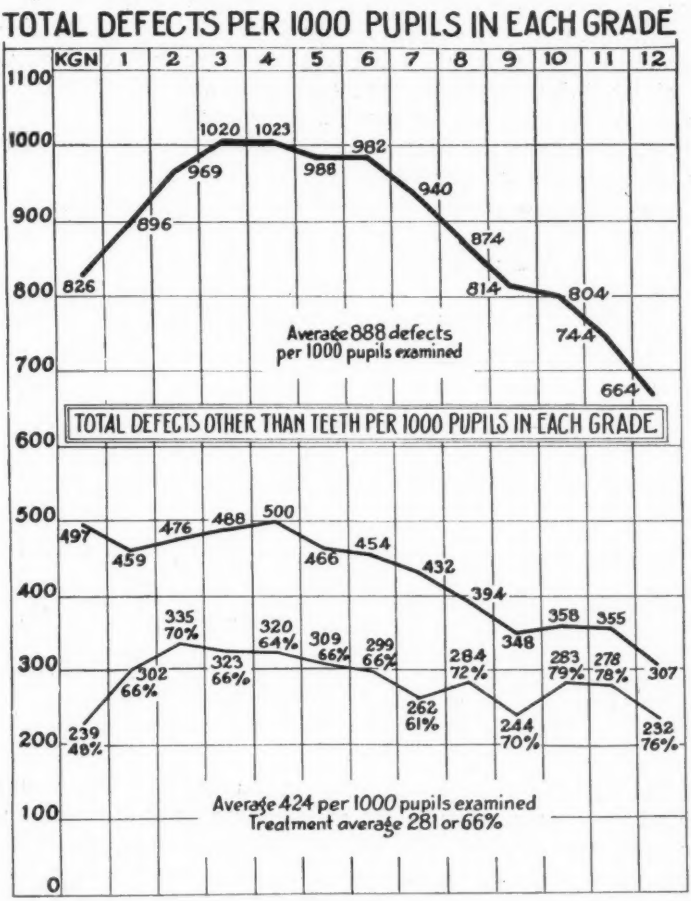


GRAPH 2

If one substracts dental defects from the total defects, we have an entirely different type of curve for total defects other than teeth. This is shown by Graph 3.

The top curve in the graph shows the total defects. When the defects of teeth are excluded, the second curve in the graph is the result. About half of the total defects reported in school children are dental defects. The curve for defects other than teeth is much more regular in its declination than the curve which includes the dental defects. The lowest curve on the graph indicates the treatment of total defects other than teeth. A higher percentage of defects were treated in the upper grades than in the lower grades. In grade 12 all but 71 pupils with defective teeth per thousand school children examined, and all but 75 pupils with other defects per thousand school children examined were brought under professional care. Hence there were few significant defects not brought under medical care by the time the child had completed the 12th grade in school.

Further evidence for this conclusion is shown in a study reported by Gilbert R. Lyon, Superintendent of Schools in Norwich, New York.[1] He was on the draft board during World War II, and



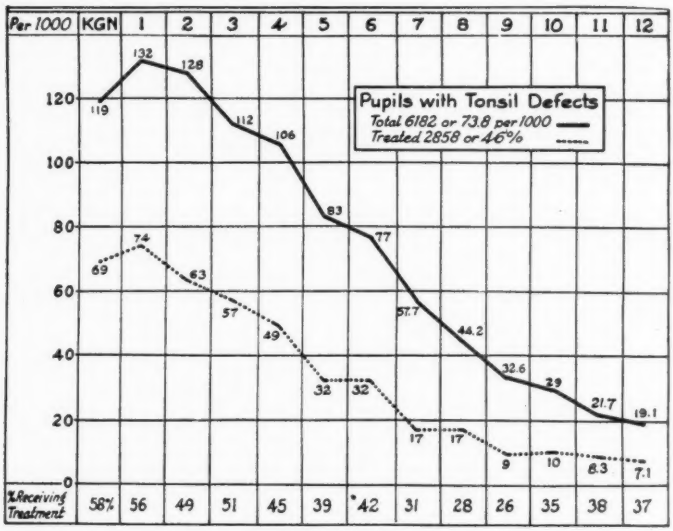
GRAPH 3

made a study over a period of six years of the high school graduates who were candidates for induction into the Armed Services in his community. Of the high school children who completed the 12th grade there were 9 percent rejected, as compared to over 30 percent in the community as a whole. Of those 9 percent, the schools were aware of practically all who were going to be rejected as most rejections were for irremediable defects such as perforated ear drums, orthopedic defects, cardiacs and chronic diseases. The significant ones which were not known to the school were those

classed as psychoneurotics and unfit for services because of this.

A study made previously by the New York State Education Department and covering individual health records showed that 2/3 of the defects are new ones each year and only 1/3 are untreated defects recorded for more than one year.

Graph 4 shows the decreasing number of children with defective tonsils as the age increases.



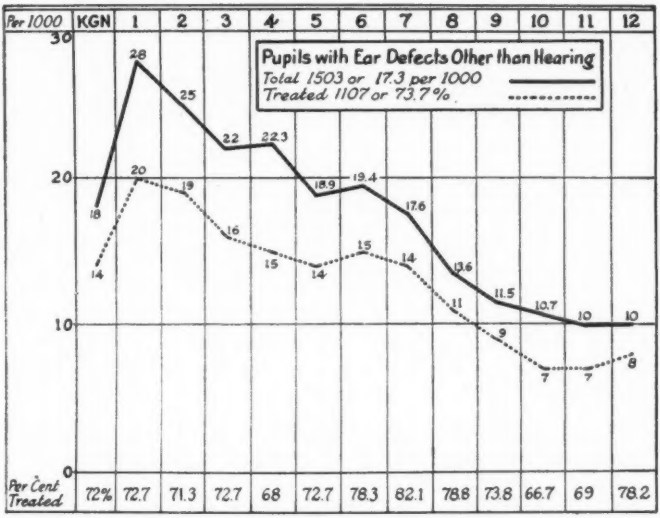
GRAPH 4

The curve is definitely lower than that in 1938 and a considerably higher percentage of the children are being brought under care than were in 1938. The curve is what would be expected due to the decreasing number of respiratory diseases that occur as the children become older. The removal of tonsils leaves less and less to become infected as time progresses.

Graph 5 shows defects of ears other than hearing.

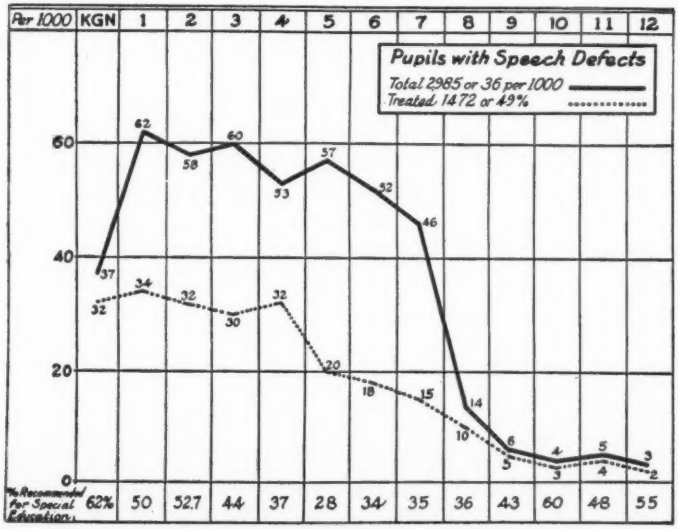
The declining number again accompanies the fewer respiratory diseases that we found in the older children. This low curve also reflects the lower death rate from mastoiditis and infections of the ear from 1925 to 1945 during which period the death rate decreased 92 percent. A high percentage of these children receive medical care.

The number of children with speech defects is shown in Graph 6.



GRAPH 5

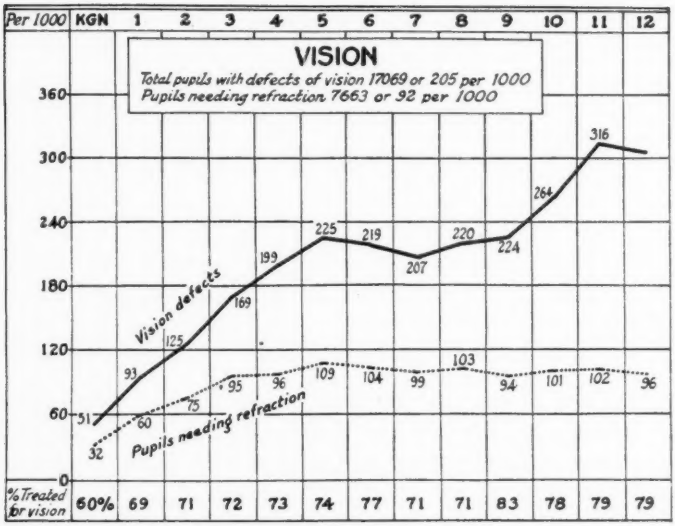
This shows a decline at the high school level. In addition to those treated medically a large percentage were given educational adjustment or special attention for speech defects in the school



GRAPH 6

which may have been largely responsible for the decline at the high school level.

Graph 7 gives the report on the children with defective vision and those needing refraction. The latter are shown on the dotted line:



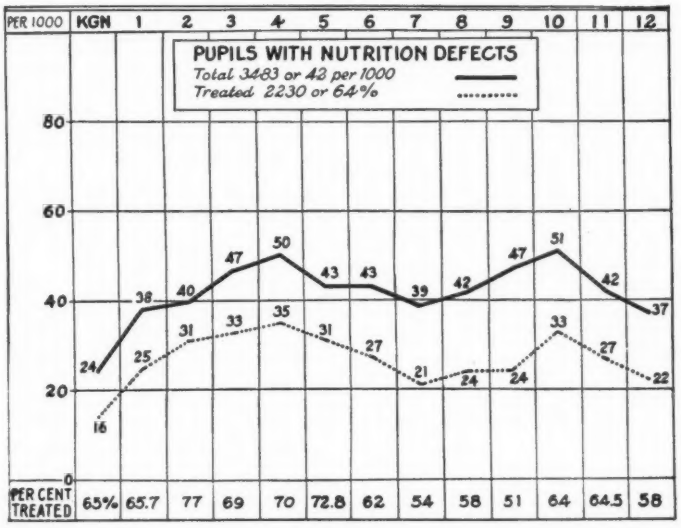
GRAPH 7

The figures along the base line show the percentages of this group which were treated. The upper curve shows the total number of children with vision defects. Hence the children represented as between the dotted line and the heavy black line were wearing apparently adequate glasses. The high percentage of defects in the upper grades is due to a yearly increment of new cases. In the past few years, there has been a definite decrease in the number of children reported to the Education Department with serious defects of vision, that is, seriously enough defective to require placement in a sight saving class or to receive particular educational adjustment for the visual handicap.

Graph 8 presents material on nutrition defects.

It is probable that this figure is lower than the actual cases of malnutrition. We believe the more serious cases only are reported. This is partly due to the fact that only the most definite malnutrition can be demonstrated to the parents. Many are resentful of

any questioning of their supervision of the children, particularly as to food habits. Consequently the school physician becomes more conservative in these cases than he probably would with private cases of his own. Previous comment has been made in this paper on comparison of nutrition defects found in 1925 with 1945.



GRAPH 8

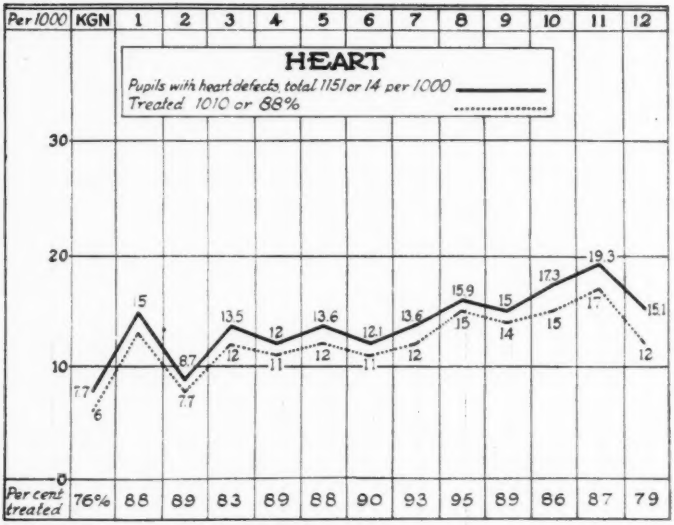
Graph 9 shows a consistent small increase in the number of children showing heart defects.

The anxiety of the parents in supervising possible heart disease is shown by the fact that 88% of the children reported with possible heart defects received medical care.

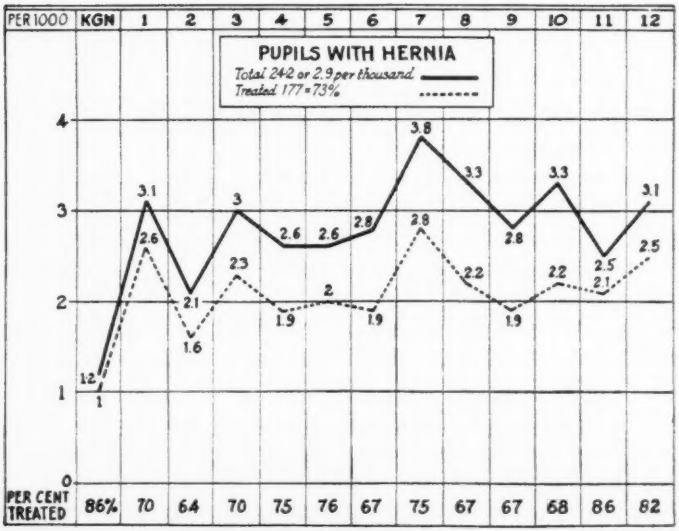
Graph 10 for hernias shows that there is a fairly steady new group of hernias reported each year.

Graph 11 for severe posture defects indicates that this number increased rapidly to grade 4 and decreased after grade 8.

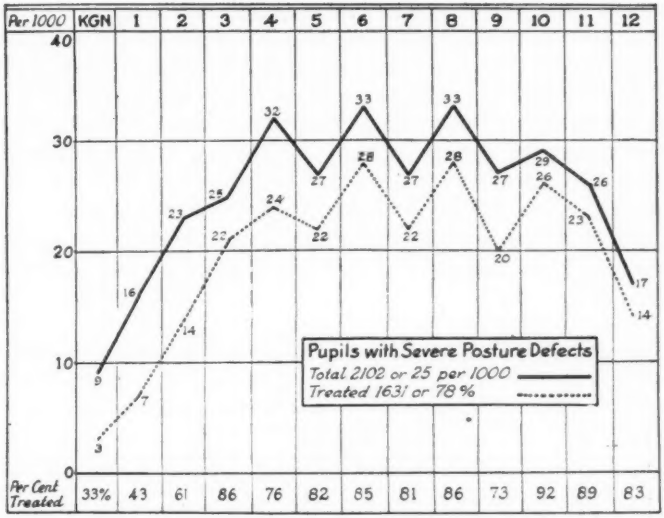
This drop in the upper grades may be partially due to the fact that starting in the 9th grade many of those who are physically fit for the best school work leave school. As children reach high school, more pride is taken in personal appearance and in many schools the physical education program is more effective, and an improvement in posture should be expected.



GRAPH 9

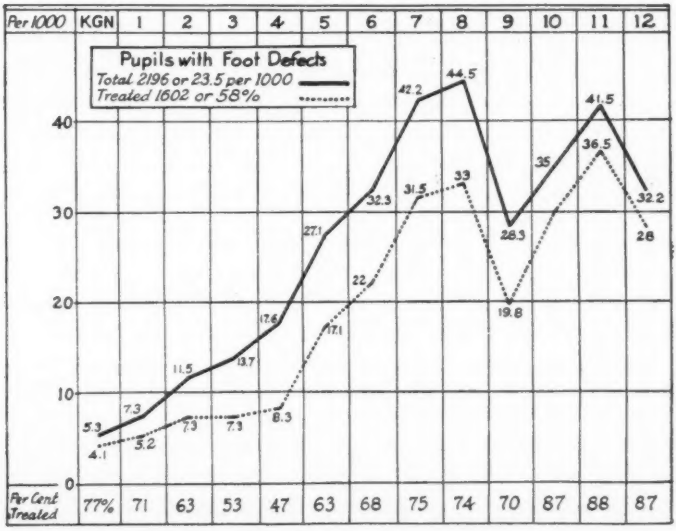


GRAPH 10



GRAPH 11

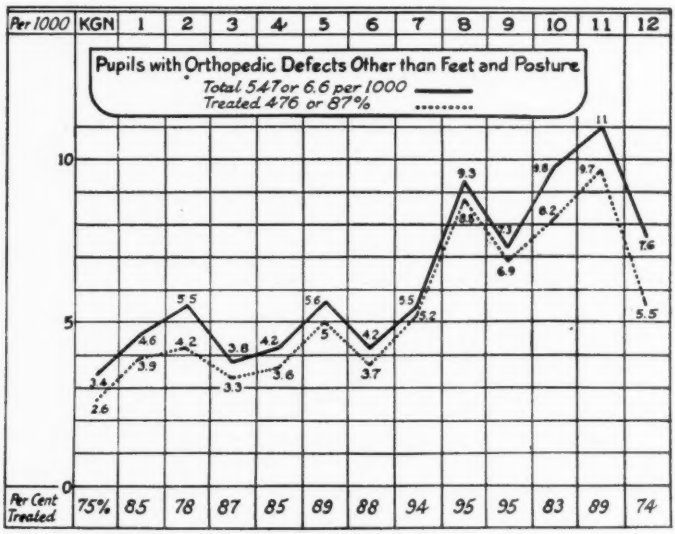
Defects of the feet also increase as the children become older, according to the curve shown in graph 12.



GRAPH 12

This may not be a true curve as again the human element is a big factor here. Families will do little about the care of small children's feet whereas at the high school level considerable care will be provided. Symptoms of foot strain may not appear until high school age. Hence greater stress on care is placed upon the feet in the upper grades than in the lower grades. For good preventive medicine more time might better be spent on the children in the lower grades before the feet become symptomatic.

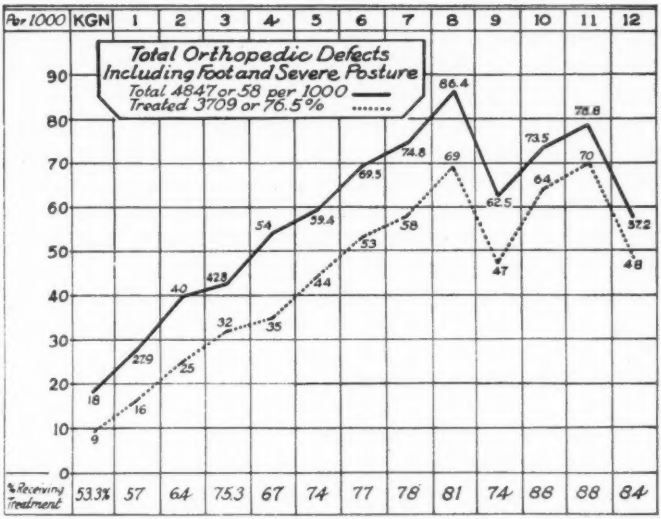
Graph 13 shows that there is a greater number of orthopedic defects other than defects of feet and posture as the children grow older.


Per 1000
KGN 1 2 3 4 5 6 7 8 9 10 11 12
Pupils with Orthopedic Defects Other than Feet and Posture
Total 547 or 6.6 per 1000
Treated 476 or 87%
10
5
0
Per Cent Treated
75% 85 78 87 85 89 88 94 95 95 83 89 74

GRAPH 13

All the defects classed as orthopedic including severe foot defects and severe posture defects are shown in Graph 14.

Again there is an upward trend toward the high school level. The drop in the 9th grade possibly is accounted for by the withdrawal of children from school who cannot compete in the more difficult high school years or who because of economic conditions must go to work. Personal pride in appearance is greater in high school than in the lower grades. The physical education is more intensive and more effective in many high schools than in the lower



GRAPH 14

grades. Hence an improvement in mechanical conditions should be expected.

SUMMARY

1. The incidence of total defects in 615,429 children examined in 1925-26 compared with the incidence of total defects in 689,606 children examined in 1945-46 shows a decrease from 905 to 818 defects per 1,000 children examined. Defects other than teeth decreased from 561 to 382; tonsils from 186 to 96; nutrition from 95 to 37; thyroid from 32 to 4. Defects of teeth increased from 344 to 436. The percentage of defects brought under professional care increased from 47 to 64%.

2. There has been a marked decrease in the death rate from most causes in the age group 5 to 19 years, and a shifting of the causes of death on the list when they are placed in the order of their decreasing number.

3. The overall death rate in the age group 5 to 19 years of age in 1945 was about one-third what it was twenty years previously. This decrease compares favorably with the other age groups. The death rate is the lowest of any age group and 1/3 less than the next higher group.

4. Dental defects constitute about half of the total defects reported.

5. As children become older there are less total defects found on the examination. However, some defects show an increasing incidence as the child gets older, while others show a decreasing incidence. For example, some defects have a peak incidence in the 3rd or 4th grade, others in the 7th and others in the 11th grade.

6. If the efforts of the school health service are to be directed toward finding and correcting the greatest number of defects, the major emphasis should be given to the early grades. However, in so doing, some significant defects which have their peak incidence in the upper grades will be largely missed.

7. Defects showing a decreasing incidence as the child grows older are: Teeth, tonsils, speech, and defects of ears other than hearing.

8. Defects becoming more frequent as the child grows older are: Vision, nutrition, heart, hernia and orthopedic defects including defects of feet and posture.

9. In general, as the child grows older, a higher percentage of the defects found are brought under professional care.

10. At the end of the 12th year, there are few significant untreated defects.

1 Lyon, Gilbert R., "Selective Service Rejections and School Health and Physical Education Programs." *Journal of Health and Physical Education.* Vol. 16, No. 8, P. 440.

SEX EDUCATION IN TOMORROW'S SCHOOLS

HARRIETT B. RANDALL, M.D.
Supervisor, Health Services, Los Angeles, Calif.

A statesman recently said, "Tomorrow is already here and it isn't yesterday."

In the discussion of the place of sex education in the schools of tomorrow, we must also accept the premise: Tomorrow is here and it is *today*. As we pause a moment to define sex education, we find ourselves at once expanding the scope of the subject to include all the broad aspects of the development of boy and girl, man and woman, with the physical and emotional changes that this maturing presents. Immediately we question what terminology we should use to describe such a course to be presented to young folk in our schools.

Because of our very feeling of the breadth of the subject, we hesitate to use any label, which, when mentioned, causes from certain groups a raising of the eyebrows, or more important, active resistance to its presentation. Over and over again one hears chairmen, presenting a speaker on "Sex Education" to the audience, "doctor-up" the title of the talk. By a round-about introduction, they will sneak up on the fact that the speaker is going to talk to the audience about "SEX".

Since this response seems so universal, it is likely we should name the school discussions on "Sex Education" differently. The Titles "Sex and Family Life Education", "Human Development and Family Life" or simply "Family Life Education" more nearly indicate the true scope of a school program of sex education.

Believing that sex changes and differences should be taught not only specifically and scientifically but broadly, with emphasis on the individual's place and responsibility in our society and to our society, only persons who have this approach to the subject should attempt its teaching. The good leader cannot accept the premise of one physician writer: that sex is and has always been the best joke of all time. He was a matriculate of the gutter school and he believed it as good a school as any.

This leads one to the question "Who are these good leaders?" In my opinion there are no more logical persons to give leadership in this field than the school physicians. With their training and experience, with their understanding of the personality and its potentialities and problems, they should be well qualified. Most school systems will seek the help of their physicians if they are

attempting a sex education program, but they will turn elsewhere if their requests always find the doctor with "another appointment" elsewhere. Are we not failing in one of the greatest services we can give a school system, or the youth in that system, if we evade the opportunity to help? In what field do young folk need more scientific knowledge and expert guidance than in the resolution of their anxieties or concerns regarding their physical growth and powerful biological urges?

A parent told me of a remarkable statement a teacher had made to his 12th grade class:

The teacher had asked, "What is the most important thing in the life of a high school senior?" "What is it Mom?", the boy asked his mother. "Good grades of course," was the mother's immediate reply—"We want you to go to college."

"No, Mom, that's where you're wrong" the son replied—"Mr. ..... says the most important thing for us in high school is good boy and girl relationships."

Pretty wise remark, don't you think?

What one decision has influenced our own life for better, for worse more than the choice of our mate? What more vital decisions do young folks make than those related to their associations with the opposite sex?

My first brush with sex education at school was in the little home town with the story book type of frustrated, bachelor schoolmaster attempting by colossal vagaries to warn two 9th grade graduates of the great temptations of the primrose path just ahead. Mother was furious when told of the incident, muttering "What does he mean?"—"he has no business." All of which made the teacher's attempt embarrassing and ominous. However well-intentioned, the ill-prepared, the emotionally maladjusted persons should not try to teach young folk the truths of normal sex living that can be so viciously garbled or distorted. It is important for young folk to accept themselves and their normal interest in sex matters without embarrassment and anxiety, yet realizing that greater understanding comes with greater maturity. Furthermore, they should know that the "ideals and standards of sex are not separated from the ideals and standards of all good living."

First, because of his very training, the school physician should be in a position to step out and give leadership. Ideally one of the first things the physician should attempt is seeing that from kindergarten to the college level, there is a definite plan for adequate sex and family life education incorporated into the total school curriculum. This should be appropriate to the development and

needs of the child at various age levels. This may mean that some person or persons from the school physicians' staff will be willing to assist in writing the curriculum and suggesting good source materials. He will have to have adequate time designated for this enterprise.

Second, the school physician should be willing, if asked, to help conduct in-service training meetings for teachers in the sex and family life education program. Most teachers themselves feel poorly prepared to teach and answer wisely the questions of young folk. Most have had very little preparation in this field in their teacher training work. *Their* questions often indicate a woeful lack of correct information and understanding. They want help with *What* to teach, *When* to teach, *How* to teach this subject. Practical demonstrations of techniques and methods are most helpful. Here the workshop type of meeting has real value. In most presentations there should be some role playing where the doctor himself presents to the imaginary "class" a typical discussion he would give students of designated school ages. Good sex knowledge for children should include:

Adequate vocabulary.

Recognition of sex differences without embarrassment or concern.

Normal interest in body growth.

Knowledge of body processes as—elimination, menstruation, reproduction and birth.

Printed or mimeographed materials of concise practical suggestions, in addition to the curriculum guide, to give parents and teachers, are very useful. For example, you are talking to a group of parents of young children. Here, perhaps, your most valuable teaching will be done. After your discussion give your audience a page reiterating important points to remember in training children of this age group emphasizing the importance of normal attitudes on the part of parents or teachers with respect to genital functions, simple correct vocabulary, hygiene and appropriate conduct. Perhaps you should include a few sample answers for children's usual questions regarding birth and reproduction along with a short bibliography for those working with children of this age group.

In discussions with parents or teachers of adolescent students, necessary information cannot be condensed to one page. Perhaps the thing that most nearly meets the need is a page listing good books for various age levels. When helping prepare teachers for this type of instruction, various charts, films and slides should be

made available to them. There are an increasing number of these. The physician should work with the school Visual Education Section to see that these helps are easily available. In Los Angeles we have had some charts made under the direction of the School Health Division, Health Education Section, that have proved invaluable. Slides are to be made from these which, when projected, will make the diagrams clearly visible to the back of the room.

Films should be recommended by the doctor for the Visual Education Department to procure. The "Story of Menstruation", made available through the International Cellucotton Production Corporation is excellent for A6 and B7 girls, and for showing to boys in the seventh grade. A cut version of "Know for Sure" is valuable in venereal disease teaching to high school boys, and "Message to Women" is a fine color film on the same subject for high school girls. A recent California Bulletin of Public Health listed two new films on Venereal Disease available: "Very Dangerous" (boys), "Sixteen to Twenty-six" (girls)—just two new aids available which come first to the doctor's desk for consideration and recommendation to his schools.

Third, should not "tomorrow's" school physician be able, as already implied, and *willing* to talk (not only to faculty and interested parent groups) but most important, to student groups in order to augment the program in his schools. True, he cannot attempt much of the actual classroom teaching but he can help with it. More than just giving leadership to teachers, why should not the school physician participate in the program in his assigned schools by giving a few talks to students as well? These talks should not be just a sudden, brief exposure of students to the anatomy and physiology of sexual functioning but the authoritative emphasis of a physician to a well organized continuing program being conducted in the school by able teachers. The authority of the physician is appreciated by youth and by able teachers, and the school physician assumes one of his greatest functions—that of counsellor and friend. Perhaps the most valuable result of the talks to students is the individual problem that comes to you after such a talk. Such teaching opens wide the door for confidences, and individual students will privately seek your counsel.

Young folk's questions in the aggregate will be similar all over the United States. Hundreds of questions gathered from widely varied social areas of school population in an urban area indicate this. (1) The beginning Junior high students' questions indicate typical interest for the main part in the physical maturing of the

sexes and related physiology and hygiene. Birth, variations from normal birth, abnormalities, superstitions, etc., interest the young adolescent. (2) The older junior high school student's inquiries include in addition, questions about dating, going steady, and boy-girl relationships in general. (3) The senior high school student will question less about anatomy, physiology, and hygiene of the reproductive organs, and more about personal relationships with the opposite sex, dating, type of lovemaking, restrictions or privileges of the engagement period, venereal disease, and marriage and family planning.

To keep the confidence of these young folk, I feel we must answer all their questions. It is well to anticipate their questions and decide the answers in advance. If we want no reversal in the program, we must offend none of the major parent groups represented in the school population. There are two major controversial areas—"Birth Control" and "Venereal Disease". We cannot in any way condone extra marital privilege, but always emphasize the physical and psychological advantages of chastity in both sexes. Young folk want specific answers on family planning, but I personally feel there is only one safe answer to a group: "It is the right of young people today to plan the size of family they feel they can support and educate. Before marriage they should consult their family religious advisor for counsel in this regard if their particular faith so dictates. Otherwise, when they go for premarital physical examination to their family medical doctor (as all thoughtful young folk should do), they should then seek scientific medical advice in regard to family planning. All other procedures are unwise and unsound." This answer will not satisfy many of the older students, but more specific discussion on the high school level will probably bring unfavorable repercussions—which must be avoided.

Discussions of venereal diseases are best reserved, in most cases, for the older student; 9th grade and up. The purpose of these discussions is not to horrify and frighten the student into morality. Our job is to inform them of certain communicable diseases. (I often lead up to these discussions by telling students I am going to *"Vaccinate"* them against *"Venereal Disease"* with *"Knowledge"*. The *Take* will depend on them. If they remember, when they should, the information given, the *"Vaccination"* will probably be successful.) Mention of correct treatment of venereal disease is valuable. Details of treatment are unnecessary but emphasis of treatableness is most important. If the discussion of dis-

ease and treatment is offensive to certain students, it may be wise for them to be excused if they request it rather than stir up opposition to the program.

Throughout that portion of the program that deals with love and marriage, we must stress the fact that "real sex fulfillment comes best through a permanent love relationship in marriage that is deepened and enriched by building a life and future together in the hope of lasting love and respect."

As far as the rest of the program goes, I feel the major problem is not so much what your answers will be (to the physician that aspect is not difficult), but the proper timing of information given.

We must be ready to answer simply the questions of the starry-eyed kindergartner who all of a sudden, out of the blue, asks, "How do all the babies get down from Heaven?" We must be able to counsel wisely the teacher who seeks help in handling the first grade girl who wriggles with erotic absorption on the edge of her chair. The pimply-faced boy who suffers awkward embarrassment about his unpredictable voice, and the ardent advances of his more mature girl contemporaries, needs competent sex guidance.

The 14-year-old street girl—who wanders over cities, apeing the "Black Dahlia" or others—and snarls when questioned about her venereal infection—"My mother told me nothin' about nothin' —all I learned is what I picked up" is a reflection on us all.

The unwed, unhappy girl from one of the "best families" who needs a school exclusion until after the birth and adoption of her unwanted child will come to your office.

The love sick lass who worries about too long an engagement and the youth wanting help in plans for the contemplated marriage need good counsel.

These are just a few of the everyday situations that confront the school doctor. The present physical and emotional problems we dare not neglect as their consequences are more far-reaching to the individual and to society than infected tonsils or poor posture.

As one works with teen-agers there is a growing awareness of how major and mature these children's problems often are. After returning from a recent series of talks to young girls in a certain suburban school a call came to my desk. A frightened, almost hysterical girl said, "You talked to us at our school—we thought maybe you could help. My girl friend is in trouble—she's going to have a baby—the boy is just a tramp. What can we do?" When

asked if the girl had talked to her mother, she said, "Oh, no—oh, no! Her mother's very religious—she'd probably beat her. She's afraid!" Many homes are not doing the job of teaching and guiding their children that should be done. In the past several years almost all girl problems of this sort referred to our office have existed in 14, 15 and 16-year-old girls, seldom older girls come to us.

More and more, responsibility is being placed on the schools for moral and spiritual education. If education does not prepare boys and girls for successful, useful, happy life, it has essentially failed. A knowledge of sex facts is not a specific guard against trouble, but it is basic and fundamental and something on which to build. Children should not be denied wholesome, correct information. In order that adolescents may escape developing unfavorable ideas and often fears about sex, they need to know the true facts and understand the moral, social and health implications of good sex living for themselves and society.

Dickerson and Beam showed in a study of "A Thousand Marriages" that one of the main deterrants to sexual adjustment among women in marriage is fear. Some impact on the sex side of life to the child or little girl lasts forever. They concluded that the first step in forestalling marital maladjustment is good sex education by parents and educators of children, adolescents and engaged couples.

The medical profession must do its part to prevent sex maladjustments and to promote successful and stable marriages. As school people we need to understand our individual responsibility to the school groups. Since knowledge about sex will be acquired by the young, our job is to see that the acquiring of this knowledge by the young is properly planned, supervised and scientifically sound.

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EDITORIAL

How much does the parent know about the schools his children attend?

How old are the buildings? Twenty-one of the public schools still in use in New York City were built before the end of the war between the states. This means that they are more than eighty years old. Not only do they lack modern facilities for sanitation and education, but probably they are fire traps. A recent study of the New York City schools classifies 287 of them as fire traps.

A recent brief investigation shows that many of the text books in geography and history quit with the Spanish-American War.

Anyhow, how much good would it do for the parents of these children to investigate the schools? Most of these parents probably are the product of these same insanitary, unsafe, uneducational schools, and their knowledge of sanitation, safety and education is dated in the 19th century, not the 20th.

No wonder the mountebank politician leads them by the nose; and will continue to lead them by the nose, especially in our huge slum ridden cities, so long as we spend only 1½% of our national income for education, and 6% for tobacco and alcohol.

We wonder too, what the city Health Department is doing. Not only is the Health Department responsible for health and sanitation conditions in general, but New York City is one of the three cities in New York State where the local Health Department is by

law, directly responsible for the health services in the schools, including, presumably, health and safety facilities.

Moreover, repeating in essence the first paragraph of this editorial: How much does the parent really know about the administration of the school his child attends, such as lack of fire drills, criminally careless storage, etc. Only constant vigilance brings safety to our children.—*C. H. K.*

* * * * *

PERSONAL

Several officers of the American School Health Association have won well merited promotions:

President David Van der Slice, M.D., has gone from Flint, Michigan, where he has been Director of School Health, to the California State Department of Public Health as School Health Consultant. Dr. Van der Slice also will teach four hours a week in the School of Public Health of the University of California.

* * * * *

President-elect, Cyrus H. Maxwell, M.D., Chief of the Bureau of Health Service in the New York State Education Department since 1937, has resigned to accept a position as Chief of Administration of School and College Health Service in the United States Office of Education at Washington, D.C.

* * * * *

Gertrude E. Cromwell, R.N., Assistant Editor, Journal of School Health, for twelve years Supervisor of Health Education and Nurses in the Des Moines public schools, has accepted a position as Director of Public School Nursing in the public schools of Denver, Colorado.

* * * * *

Holger F. Kilander, Ph.D., a member of our Governing Council, who for several years has directed programs in health education, nutrition, and social hygiene for the National Tuberculosis Association, has gone to the U. S. Office of Education as Assistant Specialist in Health Education.

* * * * *

Congratulations to these fellow workers and to the organizations to which they have gone. Their long and successful service in previous positions is splendid preparation for success in their new duties.—C.H.K.

ABSTRACTS AND NOTES

We Need Four Kinds of Nurses, by Charles F. Wilinsky, M.D., President-elect, American Public Health Association,—One cannot quarrel with the sound principle that in order to increase the desire of young women for training in nursing, enrollment in this profession must be made more appealing. Among thev arious suggestions offered to bring this about are higher salaries, shorter working hours, waiver of tuition fees when necessary and the possibility of reimbursing the student nurse for the period she is in training.

Stimulation of student enrollment is going to involve the education of the public, the waging of intelligent enrollment campaigns, the reaching into our high schools, women's clubs and federations, the use of the press, the radio and the printed word.

We also face the problem of utilizing our present graduate nurses to the greatest advantage. This compels a careful analysis of their duties and responsibilities to the end that they can be used in the main for those functions which only the graduate nurse can be entrusted to perform, with supplementation of her service by persons who can carry on such nonprofessional duties as making a bed, fixing flowers, bringing fluids to the bedside of the patient, carrying the tray or bedpan and many others which can be safely entrusted to the less trained individual.

We should not compromise with the necessity for the continued maintenance of adequate professional standards of education and training for those who are to carry on professional nursing responsibilities. It would seem wiser to make available a choice of opportunities. These may well include: 1. A short course comparable to that offered to nursing aides during the war. 2. Another type of training for a period of no more than one year offering opportunities for the training of attendants and practical nurses. 3. The three-year training course for graduate nursing. 4. A course of five or more years in which are combined instruction in nursing and a college education leading to the A.B. or B.S. degree, as well as that of R.N., at the end of the training period.

We need graduate nurses and we want them well trained and of good quality. We desire that they be intelligent, in good health and interested in the improvement of their knowledge. Genius is not required as an attribute of good nurses. They must be women of character, good habits and with an interest in others.

There will always be room in the nursing profession for the college graduate who has the resources, willingness, scholastic ability, interest, devotion and time for the completion of training both

in the liberal arts and in the technics of nursing. We may well look to some of these graduates in the future for leadership, supervision, and direction.

It is important to stress that our problems and disappointments, increased by the nursing shortage, need not dull our realization of the important part which the nursing profession has played in the care of the sick. But the consciousness of the need for and the duties and responsibilities of the graduate nurse must not blind us to the importance of training what has been defined as "a secondary type of nurse." The need is great for this ancillary type of personnel if we are to give the necessary care. We cannot afford to compromise or delay. Therefore, as we make every effort to increase the enrollment of student nurses and to maintain satisfactory relationships with our graduate nursing staff, we must enlarge our plans for training nursing aides, attendants and practical nurses. We must assign duties and responsibilities in keeping with ability and training. In that way we shall cover more ground, give more service and achieve economy and dispatch in dealing with the needs of our patient loads. The provision for varied types of nursing service is economic and sound. From *"The Modern Hospital"*, October 1947 issue. Briefed by G. E. C.

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School Health Program,—The Pennsylvania General Assembly in past sessions has enacted legislation providing for complete medical and dental examination at regularly stated intervals of all children of school age and teachers and other employes of public, private elementary and secondary schools of the Commonwealth.

Procedures and responsibilities for follow-up of corrections or other treatment as recommended by the school medical examiners are included in Acts 425 and 426 of the General Assembly of 1945, and Act 522 of the 1947 General Assembly.

Amendments and additions to the various Acts have required changes in procedure and formulation of new directives. Generally speaking these are as follows:

School districts of the first, second and third class are no longer required to provide medical inspection of pupils in grades 2, 4, 6, 8, 10 and 12.

Section 1508, Pennsylvania School Law, has been amended to read as follows: "Each board of school directors or board of school directors jointly *shall employ* one or more school nurses".

A new Section 1242.1 has been added to the School Law providing that every school district and every vocational school dis-

trict shall be paid by the Commonwealth for the school year 1947-1948 and for every year thereafter on account of the employment of properly certified school nurses an amount equal to one reimbursement unit for each nurse having the care of 1,500 or more in average daily membership in the districts' *public schools,* and for each nurse having the care of less than 1,500 such pupils the fractional part of one reimbursement unit equal to the number of such pupils under their care divided by 1,500. The reimbursement provided for in this section shall be paid by the Department of Health out of any money appropriated to the said Department for administering the School Health Act and for such purpose as much of any such money as is necessary is hereby reapporpriated.

Section 1515 has been amended to clarify the procedure to be followed in the organization of local health councils.

Section 1515.1 has been added to Section 1515 placing certain responsibilities on the Department of Public Assistance providing for the payment of medical and surgical treatment under certain conditions.

Under the provisions of School Health Law, Act 522, which became effective September 1, 1947, school boards must employ school nurses as rapidly as they become available.

The board of school directors of a district, or districts jointly, appoint the nurse. Her qualifications are approved by the State Department of Public Instruction.

A county superintendent may issue an emergency certificate to a school nurse if she is a registered nurse. Reimbursement of a school district for the employment of a school nurse will be paid by the State Department of Health during the school year following that in which the service is rendered and on the basis of the certification of the Department of Public Instruction.

A school district which has less than 1,500 pupils is permitted to employ a school nurse full time, if the board desires to do so, and a district having 1,500 or fewer pupils may employ more than one school nurse. In both of such cases the reimbursement will be determined by the number of pupils under the jurisdiction of the nurse.

Nursing services provided in Act 522 apply to *public schools* only. The Pennsylvania Department of Health is responsible for nursing service in private schools in Fourth Class Districts. A Fourth Class School District may apply to the State Department of Health for nursing service until such time as it is able to employ a school nurse of its own. State Health Department nurses

will continue to serve a district until the school nurse is familiar with her duties.

Where a school district has an enrollment of less than 1,500 combination of districts having a combined enrollment of at least 1,500 pupils may be formed, and each district will receive a fractional increment for part time service as defined by law.

The school nurse will assist the doctor in the examinations as well as the dentist. The latter will also have the services of a dental hygienist or clerk assistant.

The district or county superintendent of schools is responsible for the school nurse. In fourth class districts not covered by school district employed nurses the State Department of Health will assign its staff nurses where necessary by employing part-time nurses.

The provisions of Act 522 that relate to medical, dental, or surgical treatment for school children whose parent or guardian states to the school authorities that he is financially unable to have a physician or dentist of his choice render such care, are to be rendered in close cooperation with the State Department of Public Assistance. Administration of this program and the determination of the eligibility of applicants will be on a county basis and will be handled through the various offices of the County Boards of Assistance. Total expenditures for this part of the program during the current biennium are limited to $500,000. It should, however, help materially in getting something done in those instances where the main obstacle in correcting health conditions has been lack of financial resources. Reprinted from *Pennsylvania's Health*, Department of Health, Commonwealth of Pennsylvania, October-December, 1947. p. 14.

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REVIEWS

Education and Health of the Partially Seeing Child, *Winifred Hathaway,* the National Society for the Prevention of Blindness, Inc., Columbia University Press, N. York, 1947, pp. 217. Price $2.50.

This text—a revision of the 1943 edition—presents the Historical Background, the Administrative Responsibilities, the Educational Responsibilities, and the Community Social Service Responsibilities. It should be of great service to those particularly inter-

ested in the conservation of vision and in the special education of the partially seeing child, as well as to school administrators who have organizational and administrative responsibility in the field of special education.

The chapter on Preparing the School covering such items as the building, the classroom, illumination, decoration, and the like, is particularly interesting and valuable.—*Chas. H. Keene.*

* * * * *

Hearing and Deafness—A Guide for Laymen, *Hallowell Davis*, M.D., Murray Hill Books, Inc., New York 1947, pp. 496. Price $5.00.

Information to laymen about the field of loss of hearing, and what can be done for conservation, retraining, lip reading and the use of hearing aids is badly needed. Psychologically the hard of hearing person is much more inclined to try to conceal his trouble than is the person with poor vision.

Information to the hard of hearing and to his family and friends is badly needed. Reluctance, even refusal, of the person with reduced hearing to use a hearing aid results in enormous fatigue and reduced efficiency. The topics are well covered under the general classifications of Hearing and Hearing Loss, Auditory Tests and Hearing Aids, Rehabilitation, Education and Psychology, and the Social and Economic phases.

This is an interesting and instructive text in a field about which the layman knows little.—*Chas. H. Keene.*

* * * * *

MEETINGS

First International Poliomyelitis Conference to Take Place in July,—The National Foundation for Infantile Paralysis recently announced that it would sponsor the First International Poliomyelitis Conference at the Waldorf-Astoria Hotel, New York City, next July 12 to 17.

The Department of State has been requested to transmit invitations to more than sixty foreign governments to send official delegates who will be asked to present summarizations of the problems of poliomyelitis in their countries at a special session.

The International Council for Exceptional Children is holding its twenty-fourth Annual Convention in Des Moines, Iowa, from April 25 to April 28, 1948.

American School Health Association and the American Public Health Association, Boston, November 8, 1948.

American Association for Health, Physical Education and Recreation, Kansas City, Mo., April 19, 1948.